

Linguistics 1A Morphology

4 Inflection

In an earlier lecture it was stated that inflectional morphology expresses some grammatical property of the word it attaches to. In this lecture we will consider what sort of properties can be expressed by inflectional morphology, as well as the forms that such morphology can take.

We already encountered one type of inflectional morphology in English. When a sentence has a third person singular subject, the finite verb in the sentence will carry a suffix that indicates this, namely *-s*:

- (1) a. I/You always sing/*sings the same song.
b. She always *sing/sings the same song.

Apparently, then, there is a type of inflectional morphology that shows up on one category but that is determined by particular grammatical features of a different category in the same sentence. This type of inflection is known as *agreement*. In (1), the verb *agrees* with the subject for person and number. In English, *-s* is the only overt agreement affix (see the first morphology lecture on the possibility of null affixes). Some other languages have much richer agreement morphology, in the sense that there are more distinct affixes for the various person and number combinations. There are many languages in which more combinations of the three person values and the two number values (singular, plural) a subject can have are expressed by a distinct affix on the verb. For example, Icelandic has five distinct agreement affixes, as in (2), while Italian has a distinct affix for each of the six possible person/number combinations, as shown in (3).

- (2) *ég* heyr-*i* ‘I hear’ *við* heyr-*um* ‘we hear’
þú heyr-*ir* ‘you hear’ *þið* heyr-*ið* ‘you(pl) hear’
hann heyr-*ir* ‘he hears’ *þeir* heyr-*a* ‘they hear’

- (3) *io* cred-*o* ‘I believe’ *noi* cred-*iamo* ‘we believe’
tu cred-*i* ‘you believe’ *voi* cred-*ete* ‘you(pl) believe’
lui cred-*e* ‘he believes’ *loro* cred-*ono* ‘they believe’

There are even languages that express a third number value, the so-called *dual*. This expresses that the number of the subject is exactly two: either the speaker and the listener (inclusive dual) or the speaker and a person other than the listener (exclusive dual).

For good measure, there are also languages that have even poorer subject-verb agreement than English. In some languages the form of the verb does not vary at all when different subjects are used. It would seem that these languages simply do not have subject-verb agreement. Examples are the mainland Scandinavian languages (for example Danish, as in (4)), where there is an invariable suffix on the verb, and Afrikaans, where the verb is not affixed at all, as illustrated in (5).

This illustrates that agreement can also be sensitive to different features than just person and number, in this case definiteness. Another example that shows this can also be used to show that there can be agreement between different categories than just verbs and nouns. This example comes from Dutch, and involves agreement between adjectives and nouns. In Dutch, an attributive adjective agrees with the noun it modifies with respect to the following features: its number, its definiteness, and its *gender*. Gender is a rather arbitrary property of nouns in a number of languages, which divides them into two or more classes. This can express itself in a different choice of determiner with the noun, amongst other things. German, for example, has three genders: *masculine* nouns, taking *der* as definite determiner when they occur as subject, *feminine* nouns, taking *die* in this role, and *neuter* nouns, taking *das*. French has two genders (masculine nouns that take *le* as definite determiner, and feminine nouns that take *la*), whereas present-day English does not have gender as a grammatical category. Turning back now to the promised example of agreement between adjectives and nouns, note that Dutch has two genders, neuter nouns (taking the definite determiner *het*) and non-neuter nouns (taking *de*). A prenominal adjective receives an inflectional agreement suffix *-e* when the noun is non-neuter or definite or plural, or a combination of those. When the noun is neuter, indefinite and singular, there is no inflection (or perhaps there is a null affix):

- (8) a. de koe ‘the cow’
de oud-e koe ‘the old cow’
een oud-e koe ‘an old cow’
oud-e koeien ‘old cows’
- b. het paard ‘the horse’
het oud-e paard ‘the old horse’
een oud paard ‘an old horse’
oud-e paarden ‘old horses’

Agreement for gender can not only occur between nouns and adjectives, but also between nouns and some verb forms such as past participles, as illustrated by the Serbo-Croatian example in (9), or between nouns and nominal possessors, as illustrated by the Icelandic example in (10).

- (9) Ov-a star-a knjiga je pal-a
this-FEM.SG old-FEM.SG book(FEM.SG) is fallen-FEM.SG
- (10) a. Bræður mín-ir
brothers my-MASC.PL
- b. Systur mín-ar
sisters my-FEM.PL

Let us now turn to types of inflection that do not express an agreement relation. We will look at verbs and nouns in turn.

Regarding verbs, we already mentioned in the second lecture that in some languages these are inflected for *mood*. Recall that the mood of a verb says something about the speaker’s attitude towards the factuality of what is expressed by the verb: it expresses whether the speaker regards it as a fact, a wish, a possibility, a counterfactuality, a command, etc. Recall also that English does not have inflectional morphology for mood, but expresses this category with the help of certain auxiliary verbs (such as *can*, *could*, *will*, *would*, *shall*, *should*, *must*, *may*, *might*). In a language like Spanish, however, you have to use the so-called *subjunctive* form of the verb if you want to express that you are not talking about a fact, but about a counterfactuality, wish or possibility, instead of using the *indicative* mood, which expresses a fact. (A remnant of the subjunctive in English is the form *were* of ‘to be’, as in *if I were a rich man, I*

would buy a football club). In (11a) the indicative paradigm for the Spanish verb *decir* ‘to say’ is given, whereas (11b) shows the subjunctive paradigm of this verb.

(11)	a. indicative		b. subjunctive	
		sg	pl	sg
	1	dic-o	dec-imos	1
	2	dic-es	dec-ís	2
	3	dic-e	dic-en	3
				pl
				dic-amos
				dic-áis
				dic-an

Besides indicative and subjunctive, many languages distinguish an *imperative* mood, used when the speaker expresses a command. In English, again there is no special morphology for the imperative, but it does have a property that is quite distinctive for English sentences: an imperative sentence may lack a subject. This is illustrated in (12), where the implicit subject of the sentence (namely ‘you’) is not expressed.

(12) Clean your room right now!

Another type of verbal inflection expresses the *tense* of the verb. This can be illustrated with English, as English does have some tense morphology. To be precise, it has one tense affix *-ed*, which expresses that the verb is in the past tense. Nevertheless, the paucity of inflection in English shows itself in this domain, too. When we look at different tenses than just the past (and the present), we see the same as with mood: instead of inflection, English uses auxiliary verbs. This holds for the *perfect* tense (roughly expressing ‘past with present relevance’) and for the *future* tense. Compare the indicative paradigms for the various tenses in Latin in (13) with their English counterparts.

(As an aside, note that the auxiliary of the future tense in English, *will*, doubles as a modal auxiliary, expressing mood – *John will do the dishes* expresses a high level of certainty about this fact on the part of the speaker, as opposed to *John may do the dishes* or *John should do the dishes*, so *will* does not just express future tense. Note also that future tense as such can be perfectly well expressed in English by using a present tense form of the verb: *John goes to Paris tomorrow* is a non-contradictory sentence. It is, therefore, not so clear whether English actually has a future tense as a distinct grammatical category at all).

(13)	Present		Past	
	laudō	‘I praise’	laudābam	‘I praised’
	laudās	‘you praise’	laudābās	‘you praised’
	laudat	‘s/he praises’	laudābat	‘s/he praised’
	laudāmus	‘we praise’	laudābāmus	‘we praised’
	laudātis	‘you(pl) praise’	laudābātis	‘you(pl) praised’
	laudant	‘they praise’	laudābant	‘they praised’

Future		Perfect	
laudābō	‘I will praise’	laudāvī	‘I have praised’
laudābis	‘you will praise’	laudāvístī	‘you have praised’
laudābit	‘s/he will praise’	laudāvit	‘s/he has praised’
laudābimus	‘we will praise’	laudāvimus	‘we have praised’
laudābitis	‘you(pl) will praise’	laudāvístis	‘you have praised’
laudābunt	‘they will praise’	laudāvērunt	‘they have praised’

In the perfect and future tenses, Latin uses inflection on the verb just as in the past tense. In contrast, English uses a *periphrastic* construction in these tenses, meaning a construction in which an auxiliary element occurs besides the main verb. Note that in a periphrastic construction it is the verb that is inflected for past/present tense that is inflected for agreement as well in English. In a few languages, non-tensed verb forms such as participles or infinitives can show agreement as well, as the following example from Hungarian (with a 3rd person singular agreement affix *-a* on the infinitive *bevallani*) shows:

- (14) Kellemetlen volt Jánosnak az igazságot bevalla-ni-a
unpleasant was John the truth admit-INF-3SG
 ‘It was unpleasant for John to admit the truth.’

Let us now turn to inflection on nouns. In English, nouns can be inflected for number: a plural noun gets an inflectional suffix, most often *-s*. Another type of widely attested nominal inflectional morphology, not present in modern English, is inflection for *case*. To get an idea of what this is, we will consider some German examples first. Above it was noted that nouns come in three genders in German, and that masculine nouns go together with the definite determiner *der*, as is the case for the noun *Mann* ‘man’ in (15a). However, in (15b) and (15c), this same noun suddenly combines with different definite determiners, namely *den* and *dem* respectively. A similar change of determiners occurs with the feminine noun *Frau* ‘woman’ in the examples.

- (15) a. Der Mann gab der Frau den Hut.
the man gave the woman the hat
 b. Die Frau gab dem Mann den Hut.
the woman gave the man the hat
 c. Die Frau sah den Mann.
the woman saw the man

What is happening here is that the different forms of the determiner express the different *grammatical function* of the noun (or, to be more precise, of the noun phrase built around the noun, as will become clearer in the syntax lectures). The various grammatical functions that phrases can have in a sentence will be discussed in some detail in the syntax lectures, where it will become clear that in (15a) *der Mann* is the subject of the sentence, in (15b) *dem Mann* is the indirect object and in (15c) *den Mann* is the direct object. The different form of the determiners here is an instance of case morphology, morphology that expresses the grammatical function of a noun phrase. German has four different cases. Very roughly, their distribution is as follows:

- (16)
1. the *nominative* case – for subjects
 2. the *genitive* case – for ‘possessors’ of another noun
 3. the *dative* case – for indirect objects
 4. the *accusative* case – for direct objects

An example of the genitive is the following:

- (17)
- | | | |
|-----------------|----------------|----------------|
| der Hut | [des | Mann-es] |
| <i>the hat</i> | <i>the-GEN</i> | <i>man-GEN</i> |
| ‘the man’s hat’ | | |

You can see from (15) that in German case is expressed mainly on elements accompanying the noun, such as determiners, rather than on the noun itself (with the exception of the genitive, as illustrated by (17)). In many other languages there is case inflection on nouns themselves. In Latin, for example, the noun *femina* ‘woman’ has the following distinct case forms:

- (18)
- | | singular | plural |
|------------|-----------------|-------------------|
| nominative | <i>femin-a</i> | <i>femin-ae</i> |
| genitive | <i>femin-ae</i> | <i>femin-arum</i> |
| dative | <i>femin-ae</i> | <i>femin-is</i> |
| accusative | <i>femin-am</i> | <i>femin-as</i> |

Also, the number of cases distinguished in a language can exceed the four we see in German, as is illustrated by the Finnish case paradigm for the noun *talo* ‘house’:

- (19)
- | | | |
|---------------|----------------|--|
| 1 Nominative | <i>talo</i> | house (subject) |
| 2 Genitive | <i>talon</i> | of a house |
| 3 Accusative | <i>talon</i> | house (certain direct objects) |
| 4 Partitive | <i>taloa</i> | house (certain direct objects, certain subjects) |
| 5 Essive | <i>talona</i> | as a house |
| 6 Translative | <i>taloksi</i> | to a house (fig.) |
| 7 Inessive | <i>talossa</i> | in a house |
| 8 Elative | <i>talosta</i> | out of a house |
| 9 Illative | <i>taloon</i> | into a house |
| 10 Adessive | <i>talolla</i> | at a house |
| 11 Ablative | <i>talolta</i> | from a house |
| 12 Allative | <i>talolle</i> | to a house (concr.) |
| 13 Abessive | <i>talotta</i> | without a house |

Another interesting type of case system is exhibited by a minority of languages with case morphology. Consider the German case system briefly outlined above once more: there is one case for subjects (the nominative) and another one for direct objects (the accusative). With respect to subjects receiving the nominative, it does not matter whether the verb in the sentence is a transitive verb (also taking an object) or an intransitive verb (not taking an object):

- (20) a. Der Mann las den Artikel.
 the_{NOM} man read the_{ACC} article
 b. Der Mann schlief.
 the_{NOM} man slept

In some languages, however, the subject of an intransitive verb gets the same case as the *object* of a transitive verb, rather than the same case as the transitive subject. This is the so-called *absolutive* case. In contrast, the subject of a transitive verb receives its own distinctive case, the *ergative* case. The Yup'ik (Inuit) examples in (21) illustrate this pattern:

- (21) a. Arnaq yurartuq.
 woman-ABS dances
 b. Angutem tangrraa arnaq.
 man-ERG sees woman-ABS
 ‘The man sees the woman’ (NOT: ‘The woman sees the man.’)

So far, almost all the examples of inflectional morphology we have discussed involved affixation. They showed cases in which an inflected noun, verb or adjective received a particular inflectional affix. The morphology of a language can involve different means to inflect a word as well, however. Consider for example the past tense of so-called ‘strong’ verbs in English, such as *to break*, *to steal*, *to sting*, or *to ring*:

- (22) *break-ed broke
 *steal-ed stole
 *sting-ed stung
 *ring-ed rang

Instead of taking the suffix *-ed*, these verbs form their past tense by changing the vowel in the stem. Since this vowel change expresses exactly the same thing as the inflectional affix *-ed*, namely past tense, it is to be regarded as an instance of inflectional morphology. This type of process, in which an inflectional category is expressed via a vowel change in the stem, is known under the German name of *ablaut*. Clearly, in modern English ablaut is the exception rather than the rule. Historical data indicate, however, that the forerunner of the Germanic languages presumably had ablaut as the regular means to form the past tense, with every verb belonging to a so-called ablaut series (indicating the particular vowel changes the stem would undergo in the past singular, the past plural and the perfect tense). The suffix that we see as *-ed* in modern English was an innovation of Proto-Germanic.

In a few instances there is no phonological connection whatsoever between the stem allomorph of a verb in the present tense and the allomorph used in the past tense. A case in point in English are the past tenses of *to be* and of *to go*:

- (23) *be-ed *bong/*bung/*bang was
 *go-ed *gone (as past tense) went

In such cases, where a morphological process is expressed by replacing the stem with an entirely different stem, we speak of *suppletion*. Note that the verb *to be* shows

suppletion not only in its tense paradigm, but also in its agreement paradigm, where the infinitive form *be* does not even show up at all: *I am, you are, he is, we/you/they are*. The verb ‘to be’ shows such irregular morphological behaviour in many other languages as well.

Within an inflectional paradigm, it can be the case that the same affix is used for different values of the inflectional category that that paradigm expresses. We have already seen a number of examples of that. For example, whereas in the Italian agreement paradigm in (3) every value of the person and number combination is expressed by a different affix, in the English paradigm all person/number combinations except third person singular are expressed by the same form, namely the stem form without a (visible) affix. Also, consider what happens with agreement in the past tense in English. Here, there is no distinction for person/number at all anymore – there is no special third person singular past tense form. In such cases we speak of *syncretism*: the use of the same morphological form for different values of the category expressed by the paradigm. This can be the result of different affixes accidentally having the same form. There are cases in which different free morphemes happen to have the same form (so called homonymy, on which more in the semantics module; an example is constituted by the two different nouns that both have the same form *bank*, one referring to the side of a river and the other to a financial institution). If this is possible for free morphemes, we expect it can happen with affixes as well. However, in some cases syncretism is more systematic than just being the result of different affixes accidentally having the same form. Consider the English past tense once more. As just noted, there is paradigm-wide syncretism for agreement in the English past tense, as illustrated for the regular verb *to walk* in (24)

(24) I walk-ed, you walk-ed, she walk-ed, we walk-ed, you walk-ed, they walk-ed

It is very unlikely that this is a consequence of there accidentally being six different agreement suffixes with the same form *-ed*, for the following reason: *irregular* verbs show exactly the same behaviour. Those verbs that form their past tense by ablaut, and even those verbs that undergo suppletion in the past tense, also do not have a distinctive third person singular past tense form:

(25) a. I rang, you rang, she rang, we rang, you rang, they rang
b. I went, you went, she went, we went, you went, they went

This, therefore, is not an accidental property of individual verbs or individual suffixes, but rather a systematic property of the English past tense paradigm: in the past tense, the person distinctions that are there in the present tense are *neutralized*. In the English past tense, verbs are just not inflected for person agreement at all.

The English past tense can be used as well to make a final point. The regular way to form the past tense is to add the *-ed* suffix. Since this is the regular way to form the past tense, it is plausible to assume that the grammar that speakers of English subconsciously apply when speaking the language somewhere has it listed that the suffix *-ed* expresses past tense, while the morphological component of that grammar allows the combination of this morpheme with a verb. The alternative would be to assume that all past tense forms, of each and every individual verb, are listed as such in the English lexicon. This is not only a less economical assumption, but it also

cannot very well explain that English speakers are perfectly well capable of forming new past tenses from nonsense words on the spot by combining them with *-ed*, as in (26). As a speaker of English, you only have to know that *glubber* is a verb to know that its past tense is *glubbered*, even if you do not have the faintest idea of what this word is supposed to mean and have never heard it before.

- (26) to glubber glubber-ed
 to pimmock pimmock-ed

However, a problem arises now: if there is a general rule of past tense formation in English morphology that says ‘combine the stem of a verb with *-ed* and you get its past tense’, what is to stop this rule from applying to irregular verbs like *to ring* or *to go*? In other words, why is there no free variation between *rang* and *ringed*, and between *went* and *goed*? The answer lies in a deeply fundamental property of natural language (already discussed by the Sanskrit grammarian Panini in about the 5th century BC):

- (27) *Blocking*
 A more specific form blocks a less specific form

If a form expresses a superset of the features expressed by another form, then in all cases where that more specific form *can* be used, it *must* be used. The more specific form *blocks* the use of the less specific form. The less specific form is used only in those circumstances where the more specific form cannot be used. The less specific form is therefore also referred to as the *elsewhere* form (and (27) is consequently also known as the *Elsewhere Principle*).

Consider the past tense of *to go* now. The English lexicon contains a form *went* which is specified as ‘past tense of *to go*’ and a form *-ed* which is specified as ‘past tense’. Since the former is more specific than the latter, use of the latter is blocked whenever the former can be used, so in the past tense of *to go*. As a result, **goed* is indeed ruled out. As another example, consider the formation of comparative adjectives in English. There is a dedicated morpheme that derives comparatives, namely *-er*, as in (28a). Since this form is specifically listed as ‘comparative’, it will block descriptions such as (28b) whenever it can be used.

- (28) a. warmer, faster, quicker
 b. #more warm, #more fast, #more quick

However, there is a phonological restriction on the use of *-er*: it cannot attach to certain bisyllabic words or to words containing more than two syllables. Precisely in those cases, we see the elsewhere form (in this case the syntactic description) appearing:

- (29) a. *beautifuller, *comfortabler, *typicaller
 b. more beautiful, more comfortable, more typical